

ABSTRACT

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The present invention has an object to provide a manufacturing method of a long large-diameter composite cemented carbide roll and a hot rolling method of steel using the same. The roll manufacturing method covers a composite cemented carbide roll formed by engaging with, and fixing to, a steel arbor, a sleeve comprising an outer layer made of a cemented carbide formed by integrating a plurality of previously sintered cylindrical formed members and an inner layer made of a steel material formed on the inner surface of the outer layer. The sleeve has a sectional area ratio S_o/S_i of the sectional area S_o of the outer layer and the sectional area S_i of the inner layer in a cross-section perpendicular to the rotation axis within a range of from 0.3 to 20. The sleeve has a length within a range of from 520 to 6,000 mm. When hot-rolling steel, the cemented carbide rolls of the invention are used as work rolls of at least one stand for a roughing mill and/or a finishing mill.